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Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listings of Claims:

Please Amend the remaining claims as indicated below:

1-2. (Canceled).

3. (Currently Amended) A method of determining the

osmolarity of a fluid sample, comprising:

generating sample data for the fluid sample;

accounting for transient effects in the sample data;

determining a value associated with an initial point of placement for the

sample fluid once the transient effects are accounted for;

using the determined value to obtain an osmolarity measurement

for the fluid sample; and

accounting for the effects of evaporation before determining the
value associated with the initial point of placement.

4-9. (Canceled).

10. (Currently amended) A method of determining the

osmolarity of a fluid sample, comprising:

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generating sample data for the fluid sample;
accounting for transient effects in the sample data;
determining a value associated with an initial point of placement for the
sample fluid once the transient effects are accounted for;
using the determined value to obtain an osmolarity measurement
for the fluid sample; and
wherein the transient effect is due to mechanical relaxation of the
fluid sample.

11. (Original) The method of claim 10, wherein accounting for
mechanical relaxation comprises:

determining the number of samples that it takes for the sample data
to reach a steady state after the fluid sample is introduced; and

fitting a curve to a portion of the sample data based on the
determination of the number of samples that it takes for the sample data to
reach a steady state after the fluid sample is introduced.

12. (Original) The method of claim 11, wherein determining the
number of samples that it takes for the sample data to reach a steady state
comprises using a fixed number of samples.

13. (Original) The method of claim 11, wherein determining the
number of samples that it takes for the sample data to reach a steady state

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comprises determining the point at which the sample data settles into a steady state based on the sample data.

14. (Original) The method of claim 13, wherein determining the point at which the sample data settles into a steady state comprises determining the point at which the amplitude of the sample data falls below two percent of the maximum value.

15. (Original) The method of claim 13, wherein determining the point at which the signal waveform settles into a steady state is performed using a neural network.

16. (Canceled).

17. (Original) A method of determining the osmolarity of a fluid sample, comprising:

generating sample data for the fluid sample;

accounting for transient effects in the sample data

accounting for the effects of evaporation before determining the value associated with the initial point of placement;

determining a value associated with an initial point of placement for the sample fluid once the transient and evaporation effects are accounted for; and

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using the determined value to obtain an osmolarity measurement
for the fluid sample.

18. (Original) The method of claim 17, further comprising
determining the initial point of placement after the sample data is
generated.

19. (Original) The method of claim 17, wherein using the
determined value to obtain an osmolarity measurement comprises
subtracting a baseline value from the determined value and using the
resulting difference value to determine the osmolarity measurement.

20. (Original) The method of claim 19, wherein obtaining the
osmolarity measurement comprises using the resulting difference to look
up an osmolarity value based on a calibration curve.

21. (Original) The method of claim 17, wherein determining a
value associated with the initial point of placement comprises fitting a
curve to a portion of the sample data once the transient and evaporation
effects are accounted for and extrapolating the value using the curve.

22. (Original) The method of claim 21, wherein fitting the curve to
a portion of the sample data comprises performing a linear regression.

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23. (Original) The method of claim 17, wherein the transient effect is due to mechanical relaxation of the fluid sample.

24. (Original) The method of claim 23, wherein accounting for mechanical relaxation comprises:

determining the number of samples that it takes for the sample data to reach a steady state after the fluid sample is introduced; and

fitting a curve to a portion of the sample data based on the determination of the number of samples that it takes for the sample data to reach a steady state after the fluid sample is introduced.

25. (Original) The method of claim 24, wherein determining the number of samples that it takes for the sample data to reach a steady state comprises using a fixed number of samples.

26. (Original) The method of claim 24, wherein determining the number of samples that it takes for the sample data to reach a steady state comprises determining the point at which the sample data settles into a steady state based on the sample data.

27. (Original) The method of claim 26, wherein determining the point at which the sample data settles into a steady state comprises

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determining the point at which the amplitude of the sample data falls below two percent of the maximum value.

28. (Original) The method of claim 17, wherein determining the initial point of placement comprises taking the derivative of the signal waveform and finding the sample at which the derivative is at its maximum.

29-31. (Canceled).

32. (Currently amended) An osmolarity measurement system, comprising:
a measurement device configured to receive a fluid sample and generate sample data for the fluid sample; and
a processing device coupled with the measurement device, the processing device configured to account for transient effects in the sample data, determine a value associated with an initial point of placement for the fluid sample once the transient effects are accounted for, and use the determined value to obtain an osmolarity measurement for the fluid sample, wherein the processing device is further configured to account for the effects of evaporation before determining the value associated with the initial point of placement.

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33-38 (Canceled).

39. (Currently amended) An osmolarity measurement system,
comprising:

a measurement device configured to receive a fluid sample and
generate sample data for the fluid sample; and

a processing device coupled with the measurement device, the
processing device configured to account for transient effects in the sample
data, determine a value associated with an initial point of placement for
the fluid sample once the transient effects are accounted for, and use the
determined value to obtain an osmolarity measurement for the fluid
sample, wherein the transient effect is due to mechanical relaxation of the
fluid sample, and wherein the processing device is configured to account
for mechanical relaxation by determining the number of samples that it
takes for the sample data to reach a steady state after the fluid sample is
introduced and fitting a curve to a portion of the sample data based on the
determination of the number of samples that it takes for the sample data to
reach a steady state after the fluid sample is introduced.

40. (Original) The osmolarity measurement system of claim 39,
wherein determining the number of samples that it takes for the sample
data to reach a steady state comprises using a fixed number of samples.

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41. (Original) The osmolarity measurement system of claim 39, wherein determining the number of samples that it takes for the sample data to reach a steady state comprises determining the point at which the sample data settles into a steady state based on the sample data.

42. (Original) The osmolarity measurement system of claim 41, wherein determining the point at which the sample data settles into a steady state comprises determining the point at which the amplitude of the sample data falls below two percent of the maximum value.

43. (Canceled).